

Weekly Report

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This week I focused on the implementation of the visual SVM project.

Projects

Visual SVM Project

- **Dataset** The USPS hand-written digit dataset from Guo Qi has been imported into the system. As currently I focus on binary classification, several class pairs are selected from the dataset, and queries are filtered to fulfill the requirement that the k-NNs of a query point cover both of the selected classes.
- **Interface** This week I implemented the orthographic interaction method described in [1] to support interactive manipulation of the projection matrix. The only work remained is to add a initial PCA configuration in the projection view which will be done on next Monday.
- **Collaboration with Guo Qi** Guo Qi proposed the requirement of viewing the k diverse neighbors extracted from his algorithm. I created a new branch of my system to fulfill his need of visualizing multiple classes of data.

Plan for the Next Week

- Continue implementing the interface.

References

- [1] D. J. Lehmann and H. Theisel, "Orthographic star coordinates," *IEEE Transactions on Visualization and Computer Graphics*, vol. 19, no. 12, pp. 2615–2624, 2013.